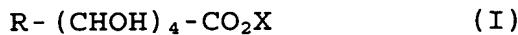


IN THE CLAIMS

1. (currently amended) A method for complexing metal cations present in either a reducing composition for bleaching or permanently reshaping keratin fibres, or keratin fibres, wherein said reducing composition comprises at least one reducing agent, comprising the step of:

Use of at least one compound corresponding to the general formula (I) below:

mixing said reducing composition with at least one compound of formula (I):



in whichwherein:

- R represents is a group CH_2OH or CO_2X group, and
- X represents is a hydrogen atom or a monovalent or divalent cation derived from an alkali metal, from an alkaline-earth metal, from a transition metal, or from an organic amine, or an ammonium cation.

in a reducing composition for bleaching or permanently reshaping keratin fibres, for complexing the metal cations present in this composition and/or on the keratin fibres onto which said composition is intended to be applied.

2. (currently amended) Use according to Claim 1, in whichwherein the said monovalent or divalent cation is chosen from the group consisting of a monovalent alkali metal cations, a divalent alkaline-earth metal cations, a divalent transition metal cations andor a monovalent cations derived from an organic amines or from an ammonium cation.

3. (currently amended) Use according to Claim 1 or Claim 2, in whichwherein the said compound(s) of formula (I) is(are) chosen from the group consisting of gluconic acid, the an alkali metal salts thereof, the an alkaline-earth metal salts thereof, the a transition metal salts thereof, the an organic amine salts thereof and the an ammonium salts thereof, andor a mixtures thereof.

4. (currently amended) Use according to any one of Claims 1 to 3 ~~The method of claim 1, in whichwherein thesaid compound(s) of formula (I) is(are) chosen from the group consisting of gluconic acid, sodium gluconate, potassium gluconate, anhydrous calcium gluconate, calcium gluconate monohydrate, calcium borogluconate, magnesium gluconate, iron gluconate, manganese gluconate, zinc gluconate andor copper gluconate.~~

5. (currently amended) Use according to Claim 1 or Claim 2 ~~The method of claim 1, in whichwherein thesaid compound(s) of formula (I) is(are) chosen from the group consisting of mucic acid, glucaric acid and mannaric acid, the an alkali metal salts thereof, the alkaline-earth metal salts thereof, the transition metal salts thereof, the organic amine salts thereof, and the ammonium salts thereof, andor a mixtures thereof.~~

6. (currently amended) Use according to any one of the preceding claims ~~The method of claim 1, in whichwherein thesaid compound(s) of formula (I) is(are) chosen from gluconic acid andor mucic acid.~~

7. (currently amended) Use according to any one of the preceding claims ~~The method of claim 1, in whichwherein thesaid compound(s) of formula (I) represent(s) is present in an amount from 0.001% to 10% by weight relative to the total weight of the reducing composition.~~

8. (currently amended) The method of claim 7, Use according to any one of the preceding claims, in whichwherein thesaid compound(s) of formula (I) represent(s) is from 0.001% to 5% by weight relative to the total weight of the reducing composition.

9. (currently amended) Use according to any one of the preceding claims ~~The method of claim 1, in whichwherein thesaid reducing composition comprises one or more reducing agents chosen from a the group consisting of reductones and or the salts andor esters thereof, a sulphites andor a sulphinates.~~

10. (currently amended) Use according to any one of Claims
~~1 to 8~~ The method of claim 1, in whichwherein thesaid reducing composition comprises one or more reducing agents chosen from the group consisting of a thiols, the salts andor esters thereof, a sulphites andor a sulphinates.

11. (currently amended) Use according to Claim ~~1~~ The method of claim 10, in whichwherein thesaid reducing agent(s) is(are) chosen from the group consisting of thioglycolic acid, thiolactic acid, cysteine, and cysteamine, thea salts andor esters thereof.

12. (currently amended) Use according to any one of Claims ~~9 to 11~~ The method of claim 1, in whichwherein thesaid reducing agent(s) represent(s) is present in an amount from 0.1% to 30% by weight relative to the total weight of the reducing composition.

13. (currently amended) Use according to any one of Claims ~~9 to 12~~ The method of claim 12, in whichwherein thesaid reducing agent(s) represent(s) is present in an amount from 0.5% to 20% by weight relative to the total weight of the reducing composition.

14. (currently amended) Use according to any one of the preceding claims The method of claim 1, in whichwherein thesaid reducing composition alsofurther comprises a one or more cationic or amphoteric conditioning polymers, in proportions of from 0.01% to 10% by weight and preferably from 0.05% to 5% by weight relative to the total weight of said composition

15. (currently amended) Use according to any one of the preceding claims The method of claim 1, in whichwherein thesaid reducing composition alsofurther comprises a one or more amphiphilic polymer which is nonionic, anionic, or cationic or amphoteric amphiphilic polymers, wherein said amphiphilic polymer comprises, comprising a hydrophobic chain, in proportions of from 0.05% to 20% by weight and preferably from 0.1% to 10% by weight relative to the total weight of said composition.

16. (currently amended) Use according to any one of the preceding claims The method of claim 1, in whichwherein the said reducing composition also further comprises one or more a surfactants., in proportions of from 0.01% to 40% by weight and preferably from 0.1% to 30% by weight relative to the total weight of said composition.

17. (currently amended) Use according to any one of the preceding claims The method of claim 1, in whichwherein the said reducing composition also further comprises one or more a rheology modifiers other than said amphiphilic polymers of claim 15. the nonionic, anionic, cationic or amphoteric amphiphilic polymers, comprising a hydrophobic chain., in proportions of from 0.05% to 20% by weight and preferably from 0.1% to 10% by weight relative to the total weight of said composition.

18. (currently amended) Use according to any one of the preceding claims The method of claim 1, in whichwherein the said reducing composition also further comprises one or more an acidifying or basifying agents., in proportions of from 0.01% to 30% by weight relative to the total weight of said composition.

19. (currently amended) Use according to any one of the preceding claims The method of claim 1, in whichwherein the said reducing composition also further comprises one or more a solvents chosen from the group consisting of water and or a mixtures composed of water and of one or more cosmetically acceptable organic solvents., this or these solvent(s) representing from 0.5% to 20% by weight and preferably from 2% to 10% by weight relative to the total weight of said composition.

20. (currently amended) Use according to any one of the preceding claims The method of claim 1, in whichwherein the said reducing composition also further comprises one or more adjuvants chosen from the group consisting of a mineral or organic fillers, binders, lubricants, antifoams, silicones, dyes, matting agents, preserving agents andor fragrances.

21. (currently amended) Use according to any one of the preceding claims The method of claim 1, in whichwherein the said reducing composition is a composition intended for bleaching or permanently reshaping human keratin fibres, and preferably the hair.

22. (currently amended) A Reducing composition for bleaching or permanently reshaping keratin fibres, comprising:

- a) at least one reducing agent, and
- b) characterized in that it also comprises at least one compound corresponding to the general of formula (I) below:



in whichwherein:

- R represents is a group CH_2OH or CO_2X group, and
- X represents is a hydrogen atom or a monovalent or divalent cation derived chosen from an alkali metal, from an alkaline-earth metal, from a transition metal, or from an organic amine, or an ammonium cation,

with the proviso that,

when the said compound of formula (I) is gluconic acid or a salt thereof, said reducing agent is chosen from cysteamine and the or a salts andor esters thereof, a sulphites, a sulphinates and or a reductones, with the exception of ascorbic acid, whereas and,

when the said compound of formula (I) is glucaric acid, said reducing agent is not cysteine or a salt thereof.

23. (currently amended) The cEomposition aeeording to of claim 22, characterized in thatwherein the said monovalent or divalent cation is chosen from the group consisting of a monovalent alkali metal cations, a divalent alkaline-earth metal cations, a divalent transition metal cations andor a monovalent cations derivedchosen from organic amines or from ammonium.

24. (currently amended) The cEomposition aeeording to of claim 22 or Claim 23, characterized in thatwherein the said compound(s) of formula (I) is(are) chosen from the group

consisting of gluconic acid, anthe alkali metal salts thereof, thean alkaline-earth metal salts thereof, atthe transition metal salts thereof, anthe organic amine salts thereof andor anthe ammonium salts thereof, andor a mixtures thereof.

25. (currently amended) The composition according to any one of claims 22 to 24, characterized in thatwherein thesaid compound(s) of formula (I) is(are) chosen from the group consisting of gluconic acid, sodium gluconate, potassium gluconate, anhydrous calcium gluconate, calcium gluconate monohydrate, calcium borogluconate, magnesium gluconate, iron gluconate, manganese gluconate, zinc gluconate andor copper gluconate.

26. (currently amended) The composition according toof Claim 22 or Claim 23, characterized in thatwherein thesaid compound(s) of formula (I) is(are) chosen from the group consisting of mannonic acid, altronic acid, idonic acid, galactonic acid, talonic acid, gulonic acid andor allonic acid, thean alkali metal salts thereof, thean alkaline-earth metal salts thereof, thea transition metal salts thereof, anthe organic amine salts thereof andor thean ammonium salts thereof, andor a mixtures thereof.

27. (currently amended) The composition according toof Claim 22 or Claim 23, characterized in thatwherein thesaid compound(s) of formula (I) is(are) chosen from the group consisting of glucaric acid, thean alkali metal salts thereof, thean alkaline-earth metal salts thereof, atthe transition metal salts thereof, anthe organic amine salts thereof andor anthe ammonium salts thereof, andor a mixtures thereof.

28. (currently amended) The composition according toof claim 22 or Claim 23, characterized in thatwherein thesaid compound(s) of formula (I) is(are) chosen from mucic acid, mannaric acid, altraric acid, idaric acid, talaric acid, gularic acid andor allaric acid, anthe alkali metal salts thereof, thean alkaline-earth metal salts thereof, atthe transition metal salts

thereof, anthe organic amine salts thereof andor thean ammonium salts thereof, andor a mixtures thereof.

29. (currently amended) The composition according to of claim 2228, characterized in thatwherein the said reducing agent(s) is(are) chosen from the group consisting of a reductones, a thiols andor a the salts andor esters thereof, a sulphites andor a sulphinates.

30. (currently amended) The composition according to of claim 22 or Claim 23, characterized in thatwherein the said compound(s) of formula (I) is(are) chosen from gluconic acid andor mucic acid.

31. (currently amended) The composition according to of claim 3022, characterized in thatwherein said compound of formula (I) isit comprises gluconic acid as complexing agent and/uor said reducing agent is sodium sulphite and/uor sodium hydroxymethane sulphinate as reducing agent(s).

32. (currently amended) The composition according to of claim 2230, characterized in thatwherein said compound of formula (I) isit comprises mucic acid as complexing agent and ascorbic acid and/uor said reducing agent is sodium sulphite and/uor sodium hydroxymethane sulphinate as reducing agent(s).

33. (currently amended) The composition according to of claim 3022, characterized in thatwherein said compound of formula (I) isit comprises mucic acid as complexing agent and/uor said reducing agent is thioglycolic acid and/uor cysteine and/uor lactic acid as reducing agent(s).

34. (currently amended) The composition according to any one of claims 22 to 33, characterized in thatwherein the said compound(s) of formula (I) represent(s) is present in an amount of from 0.001% to 10% by weight. and preferably from 0.001% to 5% by weight relative to the total weight of said composition.

35. (currently amended) The composition according to any one of claims 22 to 34, characterized in thatwherein the said reducing agent(s) represent(s) is present in an amount of from

~~0.1% to 30% by weight, and preferably from 0.5% to 20% by weight relative to the total weight of said composition.~~

36. (currently amended) ~~The composition according to any one of claims 22 to 35, characterized in that it also comprises one or more constituents further comprising a compound selected chosen from the group consisting of:~~

- a) ~~a cationic or amphoteric conditioning polymers,~~
- b) ~~an amphiphilic polymer which is nonionic, anionic, cationic, or amphoteric, wherein said amphiphilic polymer comprising a hydrophobic chain,~~
- c) ~~a surfactants,~~
- d) ~~a rheology modifiers other than the said nonionic, anionic, cationic or amphoteric amphiphilic polymer of (b)s, comprising a hydrophobic chain,~~
- e) ~~a pH modifiers and~~
- f) ~~a solvents.~~

37. (currently amended) ~~The composition according to any one of claims 3622 to 36, characterized in that it also comprises one or more further comprising an adjuvants chosen from the group consisting of a mineral or organic fillers, a binders, a lubricants, an antifoams, a silicones, a dyes, a matting agents, a preserving agents and/or a fragrances.~~

38. (currently amended) ~~A method of process for bleaching or permanently reshaping keratin fibres, comprising the steps consisting in of:~~

- a) ~~applying to the keratin fibres the reducing composition according to of claims 22 to 37;~~
- b) ~~leaving the reducing composition to stand on the keratin fibres for a sufficient time that is sufficient to obtain the desired bleaching or permanent reshaping;~~
- c) ~~rinsing the said keratin fibres to remove the oxidizing reducing composition therefrom;~~
- d) ~~washing the keratin fibres one or more times, rinsing them after each wash, and optionally drying them;~~

said process also comprising, between steps c) and d), in the case of a permanent reshaping, the steps consisting in: i) applying an oxidizing composition to the keratin fibres; ii) leaving the oxidizing composition to stand on the keratin fibres for a time that is sufficient to obtain the desired reshaping; and iii) rinsing the keratin fibres with water to remove the oxidizing composition therefrom.

39. (currently amended) Device or "A kit" for bleaching keratin fibres, comprising: at least two compositions A and B intended to be mixed together to obtain a ready-to-use reducing composition, characterized in that wherein,

- a) at least one of thesaid compositions A and B contains one or more at least one reducing agents and
- b) at least one of the compositions A and B contains one or more at least one compounds corresponding to the general of formula (I) below:



in which wherein:

- R represents is a group CH₂OH or CO₂X group, and
- X represents is a hydrogen atom or a monovalent or divalent cation derived chosen from an alkali metal, from an alkaline-earth metal, from a transition metal, or from an organic amine, or an ammonium cation,

with the proviso that,

when thesaid compound of formula (I) is gluconic acid or a salt thereof, said reducing agent is chosen from cysteamine, or a — and the salts and or esters thereof, a sulphites, a sulphinates and or a reductones, with the exception of ascorbic acid, whereas and,

when the compound is glucaric acid, said reducing agent is not cysteine or a salt thereof.

40. (currently amended) A Device or "kit" for permanently reshaping keratin fibres, comprising:

a) firstly, either a ready-to-use reducing composition A or at least two compositions A' and B' intended to be mixed together to obtain a ready-to-use reducing composition, either a composition A or at least two compositions A' and B' intended to be mixed together to obtain a ready-to-use reducing composition and,

b) secondly, a ready-to-use oxidizing composition C or at least two compositions D and E intended to be mixed together to obtain a ready-to-use oxidizing composition, characterized in thatwherein,

(i) either said composition A or said at least one of the compositions A' and B' contains at least one one or more reducing agents, and either composition A, or

(ii) either said composition A or said at least one of the compositions A' and B' contains at least one or more compounds corresponding to the general of formula (I) below:



in whichwherein:

- R represents is a group CH₂OH or CO₂X group, and
- X represents is a hydrogen atom or a monovalent or divalent cation derived chosen from an alkali metal, from an alkaline-earth metal, from a transition metal, or from an organic amine, or an ammonium cation,

with the proviso that,

when thesaid compound of formula (I) is gluconic acid or a salt thereof, said reducing agent is chosen from cysteamine and theor a salts andor esters thereof, a sulphites, a sulphinates andor a reductones, with the exception of ascorbic acid, whereas and,

when thesaid compound of formula (I) is glucaric acid, said reducing agent is not cysteine or a salt thereof.

41. (canceled)

42. (new) The composition of claim 34, wherein said compound of formula (I) is present in an amount of from 0.001% to 5% by weight relative to the total weight of said composition.

43. (new) The composition of claim 35, wherein said reducing agent is present in an amount of from 0.5% to 20% by weight relative to the total weight of said composition.

44. (new) The composition of claim 22, further comprising a cationic or amphoteric conditioning polymer.

45. (new) The composition of claim 44, wherein said cationic or amphoteric conditioning polymer is present in an amount of from 0.01% to 10% by weight relative to the total weight of said composition.

46. (new) The composition of claim 45, wherein said cationic or amphoteric conditioning polymer is present in an amount of from 0.05% to 5% by weight relative to the total weight of said composition.

47. (new) The composition of claim 22, further comprising an amphiphilic polymer which is non-ionic, anionic, cationic, or amphoteric, wherein said amphiphilic polymer comprises a hydrophobic chain.

48. (new) The composition of claim 47, wherein said amphiphilic polymer is present in an amount of from 0.05% to 20% by weight relative to the total weight of said composition.

49. (new) The composition of claim 48, wherein said amphiphilic polymer is present in an amount of from 0.1% to 10% by weight relative to the total weight of said composition.

50. (new) The composition of claim 22, further comprising a surfactant.

51. (new) The composition of claim 50, wherein said surfactant is present in an amount of from 0.01% to 40% by weight relative to the total weight of said composition.

52. (new) The composition of claim 51, wherein said surfactant is present in an amount of from 0.1% to 30% by weight relative to the total weight of said composition.

53. (new) The composition of claim 22, further comprising a rheology modifier other than the amphiphilic polymer of claim 47.

54. (new) The composition of claim 53, wherein said rheology modifier is present in an amount of from 0.05% to 20% by weight relative to the total weight of said composition.

55. (new) The composition of claim 54, wherein said rheology modifier is present in an amount of from 0.1% to 10% by weight relative to the total weight of said composition.

56. (new) The composition of claim 22, further comprising an acidifying or basifying agent.

57. (new) The composition of claim 56, wherein said acidifying or basifying agent is present in an amount of from 0.01% to 30% by weight relative to the total weight of said composition.

58. (new) The composition of claim 22, further comprising a solvent.

59. (new) The composition of claim 58, wherein said solvent is water or a mixture composed of water and a cosmetically acceptable organic solvent.

60. (new) The composition of claim 58, wherein said solvent is present in an amount of from 0.5% to 20% by weight relative to the total weight of said composition.

61. (new) The composition of claim 60, wherein said solvent is present in an amount of from 2% to 10% by weight relative to the total weight of said composition.

62. (new) The composition of claim 22, further comprising an adjuvant chosen from a mineral or organic filler, a binder, a lubricant, an antifoam, a silicone, a dye, a mating agent, a preserving agent or a fragrance.

63. (new) The method of claim 38, further comprising the step of drying said keratin fibres.

64. (new) A method of permanently reshaping keratin fibres, comprising the steps of:

a) applying to said keratin fibres a reducing composition of claim 22;

b) leaving said reducing composition on said keratin fibres for a sufficient time to obtain the desired permanent reshaping;

c) rinsing said keratin fibres to remove said reducing composition therefrom;

d) applying an oxidizing composition to said keratin fibres;

e) leaving said oxidizing composition on said keratin fibres for a sufficient time to obtain the desired reshaping;

f) rinsing said keratin fibres with water to remove said oxidizing composition therefrom;

g) washing said keratin fibres one or more times, rinsing them after each wash.

65. (new) The method of claim 64, further comprising the step of drying said keratin fibres.

66. (new) The method of claim 14, wherein said cationic or amphoteric conditioning polymer is present in an amount from 0.05% to 5% by weight relative to the total weight of said composition.

67. (new) The method of claim 15, wherein said amphiphilic polymer is present in an amount from 0.05% to 20% by weight relative to the total weight of said composition.

68. (new) The method of claim 67, wherein said amphiphilic polymer is present in an amount from 0.01% to 10% by weight relative to the total weight of said composition.

69. (new) The method of claim 16, wherein said surfactant is present in an amount from 0.01% to 40% by weight relative to the total weight of said composition.

70. (new) The method of claim 69, wherein said surfactant is present in an amount from 0.1% to 30% by weight relative to the total weight of said composition.

71. (new) The method of claim 17, wherein said rheology modifier is present in an amount from 0.05% to 20% by weight relative to the total weight of said composition.

72. (new) The method of claim 71, wherein said rheology modifier is present in an amount from 0.1% to 10% by weight relative to the total weight of said composition.

73. (new) The method of claim 18, wherein said acidifying or basifying agent is present in an amount from 0.01% to 30% by weight relative to the total weight of said composition.

74. (new) The method of claim 19, wherein said solvent is present in an amount from 0.5% to 20% by weight relative to the total weight of said composition.

75. (new) The method of claim 74, wherein said solvent is present in an amount from 2% to 10% by weight relative to the total weight of said composition.

76. (new) The method of claim 21, wherein said human keratin fibre is hair.

77. (new) The method of claim 1, further comprising the step of applying said reducing composition to said keratin fibres.